

CLAIMS :-

1. A printhead assembly for an inkjet printer, the printhead assembly comprising:
a support member for mounting the printhead assembly within an inkjet printer;
a plurality of printhead modules mounted to the support member;
5 the support member has a first component and a second component; wherein,
the first component has a coefficient of thermal expansion that differs from the
coefficient of thermal expansion of the printhead modules;
the second component with a coefficient of thermal expansion that differs from the
coefficient of thermal expansion of the first component to give the printhead assembly an
10 overall coefficient of thermal expansion; such that,
the difference between the overall coefficient of thermal expansion and the
coefficient of thermal expansion of the printhead modules, is less than,
the difference between the coefficient of thermal expansion of the first component
and the coefficient of thermal expansion of the printhead modules.
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2. A printhead assembly according to claim 1 wherein the support member is a beam
and the printhead modules include MEMS manufactured chips having at least one fiducial
on each;
wherein,
20 the fiducials are used to misalign the printhead modules by a distance calculated from:
 - i) the difference between the coefficient of thermal expansion of the beam and
the printhead chips;
 - ii) the spacing of the printhead chips along the beam; and,

iii) the difference between the production temperature and the operating temperature.

3. A printhead assembly according to claim 2 wherein the first component of the beam is an outer metal shell, and the second component of the beam is a core of silicon with the outer metal shell.

4. A printhead assembly according to claim 3 wherein the beam is adapted to allow limited relative movement between the silicon core and the metal shell.

5. A printhead assembly according to claim 4 wherein the beam includes an elastomeric layer interposed between the silicon core and metal shell.

6. A printhead assembly according to claim 3 wherein the outer shell is formed from laminated layers of at least two different metals.

7. A printhead assembly according to claim 1 wherein the printhead is a pagewidth printhead for printing across the width of a page simultaneously.

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